

WHAT IS CLAIMED IS:

- 09871805-060401
1. A light emitting device comprising:
- a pixel portion;
 - a switching thin film transistor in the pixel portion;
 - 5 a current control thin film transistor in the pixel portion;
 - at least an EL element electrically connected to the current control thin film transistor in the pixel portion;
 - wherein the switching thin film transistor is an n-channel thin film transistor;
 - 10 wherein the current control thin film transistor is a p-channel thin film transistor;
 - a first pixel including a first EL element for emitting a red light in the pixel portion;
 - a second pixel including a second EL element for emitting a green
 - 15 light in the pixel portion;
 - a third pixel including a third EL element for emitting a blue light in the pixel portion;
 - wherein a triplet compound is used in the first EL element while a singlet compound is used in each of the second and third EL elements.
2. A light emitting device comprising:
- a pixel portion;
 - a switching thin film transistor in the pixel portion;

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a current control thin film transistor in the pixel portion;
at least an EL element electrically connected to the current control
thin film transistor in the pixel portion;

wherein the switching thin film transistor is a p-channel thin film
5 transistor;

wherein the current control thin film transistor is an n-channel thin
film transistor;

a first pixel including a first EL element for emitting a red light in the
pixel portion;

10 a second pixel including a second EL element for emitting a green
light in the pixel portion;

a third pixel including a third EL element for emitting a blue light in
the pixel portion;

wherein a triplet compound is used in the first EL element while a
15 singlet compound is used in each of the second and third EL elements.

~~3. A light emitting device comprising:~~

a pixel portion;

a switching thin film transistor in the pixel portion;

a current control thin film transistor in the pixel portion;

20 at least an EL element electrically connected to the current control
thin film transistor in the pixel portion;

wherein the switching thin film transistor is an n-channel thin film
transistor;

wherein the current control thin film transistor is an n-channel thin film transistor;

a first pixel including a first EL element for emitting a red light in the pixel portion;

5 a second pixel including a second EL element for emitting a green light in the pixel portion;

a third pixel including a third EL element for emitting a blue light in the pixel portion;

10 wherein a triplet compound is used in the first EL element while a singlet compound is used in each of the second and third EL elements.

4. A light emitting device comprising:

a pixel portion;

a switching thin film transistor in the pixel portion;

a current control thin film transistor in the pixel portion;

15 at least an EL element electrically connected to the current control thin film transistor in the pixel portion;

wherein the switching thin film transistor is a p-channel thin film transistor;

20 wherein the current control thin film transistor is a p-channel thin film transistor;

a first pixel including a first EL element for emitting a red light in the pixel portion;

a second pixel including a second EL element for emitting a green

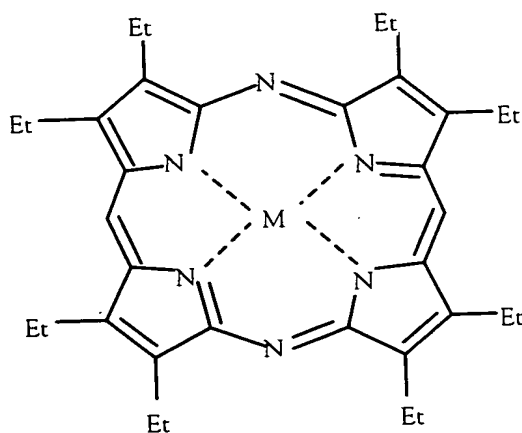
light in the pixel portion;

a third pixel including a third EL element for emitting a blue light in the pixel portion;

wherein a triplet compound is used in the first EL element while a
5 singlet compound is used in each of the second and third EL elements.

5. A device according to claim 1,

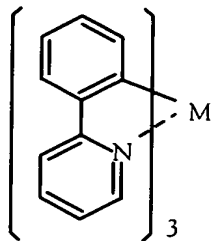
wherein the triplet compound is represented by



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6. A device according to claim 1,
wherein the triplet compound is represented by



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7. A device according to claim 5,
wherein the element belonging to Groups 8-10 in the periodic table
is one selected from the group consisting of platinum, iridium, nickel, cobalt and
palladium.

8. A device according to claim 1,
wherein each of the switching thin film transistor and the current
control thin film transistor is a bottom gate thin film transistor.

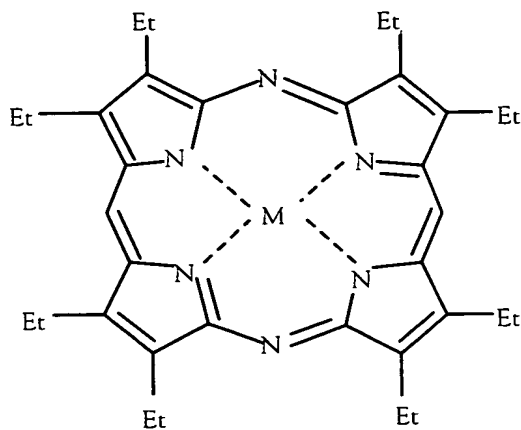
9. A device according to claim 1,
wherein each of the switching thin film transistor and the current
control thin film transistor is an inverted stagger thin film transistor.

10. A module using the light emitting device of claim 1.
11. An electrical apparatus using the light emitting device of claim 1.
12. A portable telephone using the light emitting device of claim 1.
13. A digital camera using the light emitting device of claim 1.
- 5 14. An audio equipment using the light emitting device of claim 1.
15. A method of operating the EL element of claim 1 in a range of 10V or less.
16. A method of operating the EL element of claim 2 in a range of 10V or less.
- 10 17. A method of operating the EL element of claim 3 in a range of 10V or less.
18. A method of operating the EL element of claim 4 in a range of 10V or less.
19. A device according to claim 6,
- 15 wherein the element belonging to Groups 8-10 in the periodic table

is one selected from the group consisting of platinum, iridium, nickel, cobalt and palladium.

20. A device according to claim 2,

wherein the triplet compound is represented by



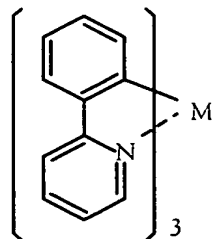
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21. A device according to claim 2,

wherein the triplet compound is represented by



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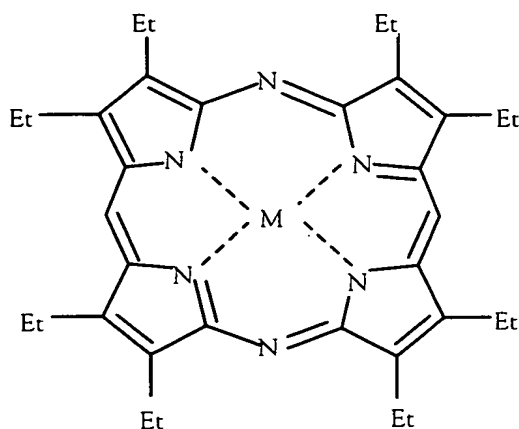
22. A device according to claim 20,
wherein the element belonging to Groups 8-10 in the periodic table
is one selected from the group consisting of platinum, iridium, nickel, cobalt and
palladium.
- 5 23. A device according to claim 21,
wherein the element belonging to Groups 8-10 in the periodic table
is one selected from the group consisting of platinum, iridium, nickel, cobalt and
palladium.
- 10 24. A device according to claim 2,
wherein each of the switching thin film transistor and the current
control thin film transistor is a bottom gate thin film transistor.
25. A device according to claim 2,
wherein each of the switching thin film transistor and the current
control thin film transistor is an inverted stagger thin film transistor.
- 15 26. A module using the light emitting device of claim 2.
27. An electrical apparatus using the light emitting device of claim 2.
28. A portable telephone using the light emitting device of claim 2.

29. A digital camera using the light emitting device of claim 2.

30. An audio equipment using the light emitting device of claim 2.

31. A device according to claim 3,

wherein the triplet compound is represented by

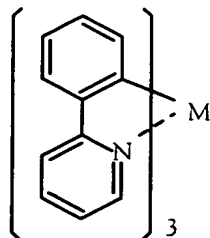


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5 32. A device according to claim 3,

wherein the triplet compound is represented by



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33. A device according to claim 31,
wherein the element belonging to Groups 8-10 in the periodic table is one selected from the group consisting of platinum, iridium, nickel, cobalt and palladium.

5 34. A device according to claim 32,
wherein the element belonging to Groups 8-10 in the periodic table is one selected from the group consisting of platinum, iridium, nickel, cobalt and palladium.

10 35. A device according to claim 3,
wherein each of the switching thin film transistor and the current control thin film transistor is a bottom gate thin film transistor.

36. A device according to claim 3,
wherein each of the switching thin film transistor and the current control thin film transistor is an inverted stagger thin film transistor.

15 37. A module using the light emitting device of claim 3.

38. An electrical apparatus using the light emitting device of claim 3.

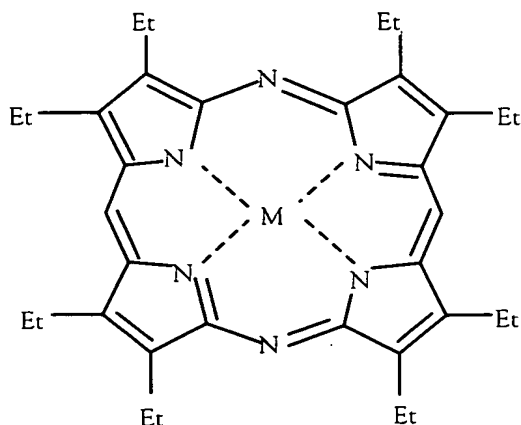
39. A portable telephone using the light emitting device of claim 3.

40. A digital camera using the light emitting device of claim 3.

41. An audio equipment using the light emitting device of claim 3.

42. A device according to claim 4,

wherein the triplet compound is represented by

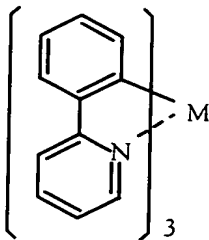


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5 43. A device according to claim 4,

wherein the triplet compound is represented by



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44. A device according to claim 42,

wherein the element belonging to Groups 8-10 in the periodic table is one selected from the group consisting of platinum, iridium, nickel, cobalt and palladium.

5 45. A device according to claim 43,

wherein the element belonging to Groups 8-10 in the periodic table is one selected from the group consisting of platinum, iridium, nickel, cobalt and palladium.

46. A device according to claim 4,

10 wherein each of the switching thin film transistor and the current control thin film transistor is a bottom gate thin film transistor.

47. A device according to claim 4,

wherein each of the switching thin film transistor and the current control thin film transistor is an inverted stagger thin film transistor.

15 48. A module using the light emitting device of claim 4.

49. An electrical apparatus using the light emitting device of claim 4.

50. A portable telephone using the light emitting device of claim 4.

51. A digital camera using the light emitting device of claim 4.

52. An audio equipment using the light emitting device of claim 4.

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